Wireless/Wired Network IP Camera

Night Vision & Remote Operation

User Manual

Thank you for buying our IP camera.

AJ Series IP Camera products are designed and equipped for local and remote network video surveillance system, including wired IP bullet camera, wireless IP bullet camera, IP IR dome camera, IP IR waterproof camera, IP Pan/Tilt/Zoom Camera etc. We adopt high performance chip to ensure high quality media processor which processes audio and video collection, compression and transmission. Standard M-JPEG compression format ensures clear and streaming video performance. It enables users to view live video via IE6.0, IE7.0, IE8.0, Firefox, Google browser or other standard browser.

AJ series IP Camera products are applicable for big, medium-sized and small enterprises, chain store, factory, home and all kinds of spots where remote network video transmission and control supposed to be installed, they are easy to be installed and operated. Before the installation of the IP camera, please check if your product accessories in the package are complete

Product Components

IP Camera ----------1 PC
Bracket（optional）----------1 PC
Power Supply- ----------1 PC
Warranty Card----------1 PC
Certificate of Quality----------1 PC
CD----------1 PC

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General Introduction

IP Camera is a new generation product with the combination of analog camera & IP video technology. Despite all functions which analog cameras have, IP camera can compress and encrypt video and audio signal then send it to remote terminals through internet with its built-in processor and web server. With its IP address, users can use standard PC browser to visit IP camera, real time monitor targets, manage and store video or image, PTZ control also is available through network.

As a new member in camera family, IP camera shares the same operation function with the analog camera, such as, auto white balance, auto shutter speed, AGC, auto backlight compensation etc. On the other hand, IP camera supports remote access through internet, and support multi-user visit, some IP cameras are able to extend to both analog and digital signal.

The core of AJ series IP cameras is 32Bit RSIC, adopts standard MJPEG compression format, camera sensor is CMOS, support auto white balance and backlight compensation, support internet browser, and cell phone view. In general, according to the function of audio simplex & duplex, infrared, wired, wireless, POE, PTZ, local storage, it has hundreds of products, to meet requirements of high, middle, low ranks of users.

1. Introduction

1.1 Safety Instructions

(1). Use the proper power source.
Do not use this product with a power source that supplies more than the specified Voltage(100-240V AC).

(2). Never insert anything metallic into the camera.
Inserting metal object into the camera can be a source of dangerous electric shock.

(3). Do not operate in wet or dusty environment.
Avoid places like a damp basement or dusty hallway.

(4). Do not attempt to disassemble the camera.
You may be subjected to severe electrical shock if you attempt to take apart the camera while the camera is connected to its power source. If there are any unusual sounds or smells coming form the camera, unplug it immediately and contact Customer Service.

(5). Handle the camera carefully
Dropping the camera on any hard surface may cause a malfunction. If the camera does not work properly due to physical damage, please contact Customer Service for repair or exchange.

(6). Apply to FCC and CE Rule
This device complies with part 15 of the FCC and CE Rules. Operation is subject to the following two conditions:
1: This device may not cause harmful interference.
2: This device must accept any interference received, including interference that may cause undesired operation.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment complies with FCC and CE radiation exposure limits set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

1.2. Product Specifications

*- Adopt high Performance, strong function media processor 32Bit RSIC
*- High sensor CMOS
*-Adopt optimized MJPEG video compression algorithm, realize high-definition images transmission in narrow bandwidth;

*-Maximum support 15 users viewing at the same time, no limit for users if using forwarder

Server function;

*- Built in Web Server, convenient for users to use standard browse to realize the real time monitoring and setting administration;

*-Support WIFI：802．11b/g wireless networking;

*-Support remote system update;

*-Support DDNS analysis, support LAN & Internet (ADSL,Cable Modem)

*-Support variety of network protocol: TCP/IP, UDP, SMTP, PPPoE, Dynamic DNS, DNS Client, SNTP, BOOTP, DHCP, FTP, SNMP, WIFI/802. 11b/g

*-Parts of modes products support one/ two way audio, talkback;

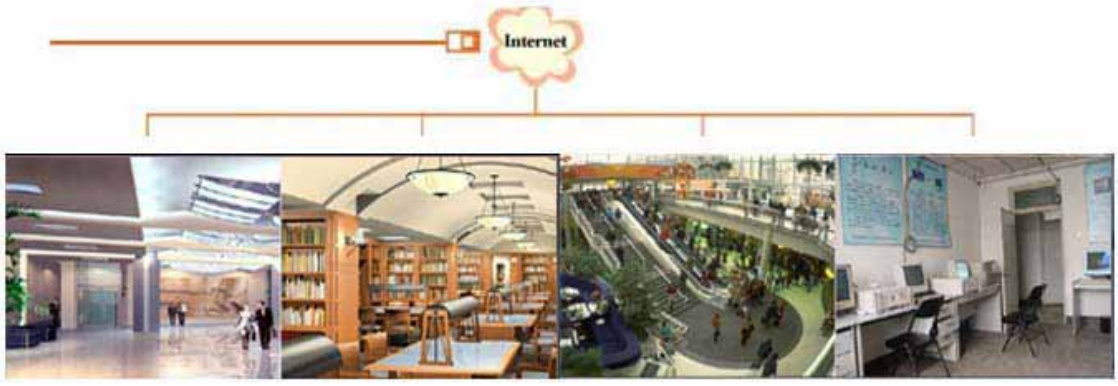
*-Support motion detection alarm function (area & sensitivity Configurable);

*-Support image snapshot

*-Abnormal automatic recovery function, auto reconnection available when network Interruption occurred.

*-Dynamic alarm function, alarm time-schedule configurable.

1.3. Applications AJ series products are ideal choice for big department, chain store, supermarket, home, factory, workshop etc.



1.4. System Requirements

CPU:	2.06GHZ or above
Memory:	256M or above
Network Card:	10M or above
Display Card:	64M or above
Operating System:	Windows XP/Vista/Windows 7 (32 bit OR 64 bit)
Hard Disk Drive:	No Maximum Storage Requirement
Internet Explorer:	Version 5.0 or above
DirectX:	Version 8.0 or above
Audio Card:	PC must have microphone and speaker connected and configured for 2-Way audio play.
Network Protocol:	TCP/IP, UDP, SMTP, PPPoE, Dynamic DNS, DNS Client, SNTP, BOOTP, FTP, SNMP, Wifi (802.11 b/g)

2. Products Panels and Controls .

There are two kinds of the panels of AJ series IP camera mailly divided into two kinds: one is body guard interface, the other is the extend line interface, set two representative products as examples, to give explanation:

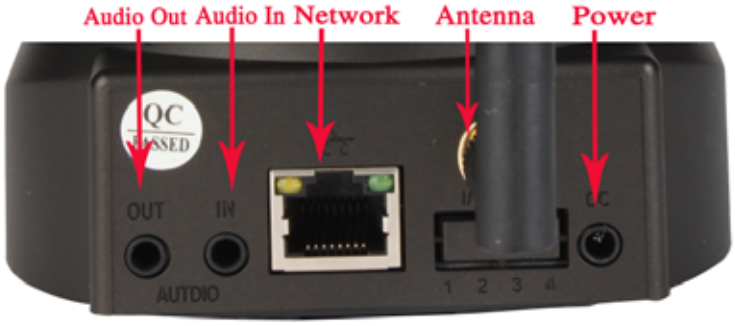
*Non-extended line IP Camera icon

*Extended line IP Camera icon

1. Built-in Antenna
2. Lens
3. Ring of LED Bulbs
4. Light Sensor
5. Microphone
6. Network Indicator Light
7. Speaker

2.1. Main Interface Introduction of AJ Series Products

*Non-extended line IP Camera Tailgate



1: Audio Out , 2: Audio In
3: Ethernet interface: RJ-45 interface. Power Supply Light: constant on after power up Network light: constant sparkle after power up data transmission.
4: Antenna:
5: Power input interface: connect direct current 5V Power

*Extension line interface definition icon:

Extension Line Of AJ Series

Power: direct current 12V.
Reset line: two reset line short circuit, equipments restore to ex- factory standards.
Ethernet interface: RJ-45 network interface.

3. Installation

3.1 Connecting you camera to your local network

When installing the camera to the local network for the first time, the camera must be connected to an Ethernet input on your router so that your network can locate your camera.

1. Power on the camera in close proximity to your router.

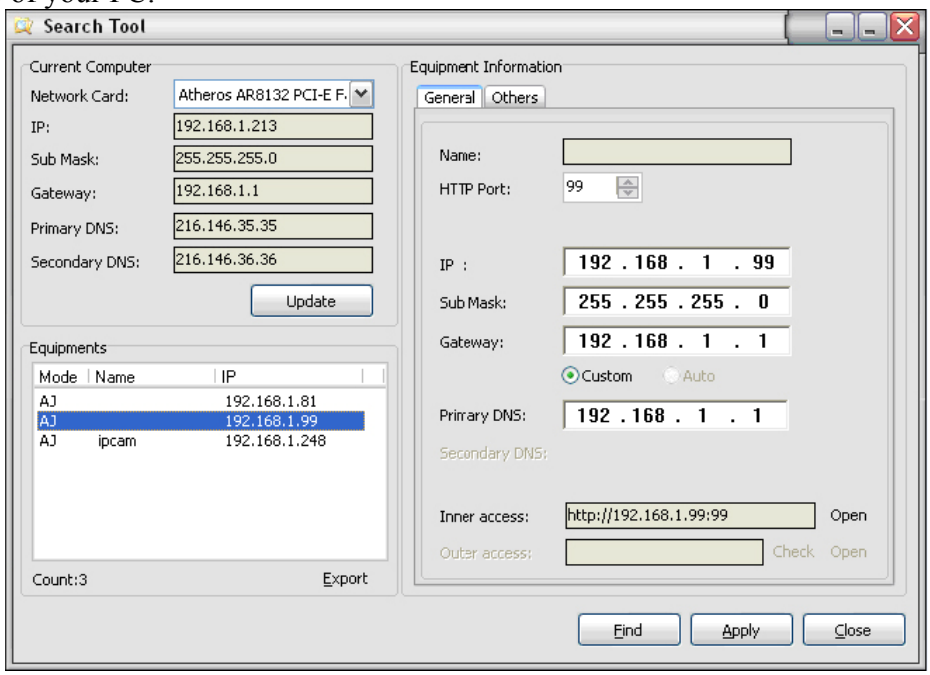
2. Directly connect your camera to your router using the Ethernet cable.
If the yellow and green indicator lights on the camera are blinking, then your camera is successfully communicating with your router.

3. Insert the software CD (included) into your PC.

The Data in the CD
IPCAM User Manual for IE
Mobile View Software
Search Tool
OCX Setup
User Instructor
Text Document
1 KB
IP Camera player
the IP camera search tool,used for Find the IP Address of the IP Camera.

4. Run the program labeled “OCX Setup” form the file folder on the software CD.

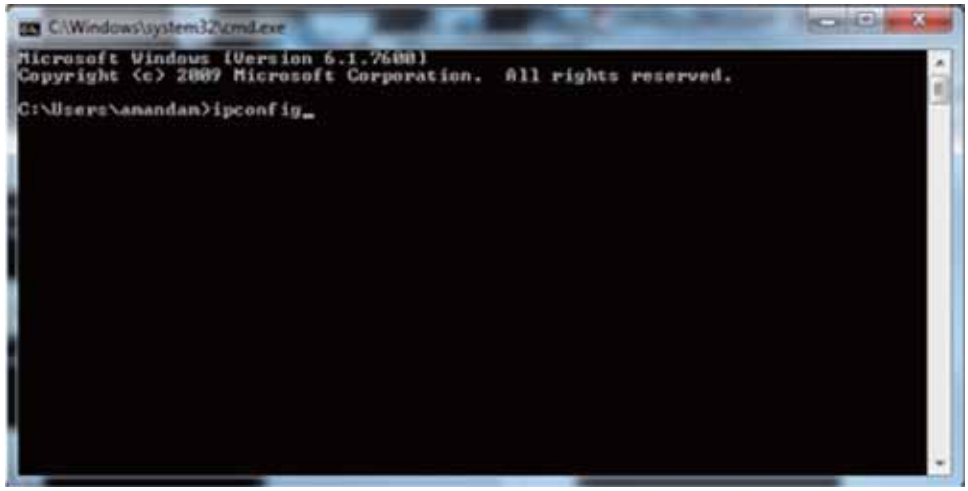
5. After the “OCX Setup” program has installed. Please run the “Search Tool” software. This software is used to search the IP address of the ip camera in your local network. Note: “Search Tool” Software no need to install, if you need it , you can copy it to your desktop of your PC.



6. Click “Find” to find the IP Camera on your router. (If you have several items on your router, check the bottom of the camera for the factory IP setting.)

7. Once you have located the camera on your router, open the command prompt (cmd).

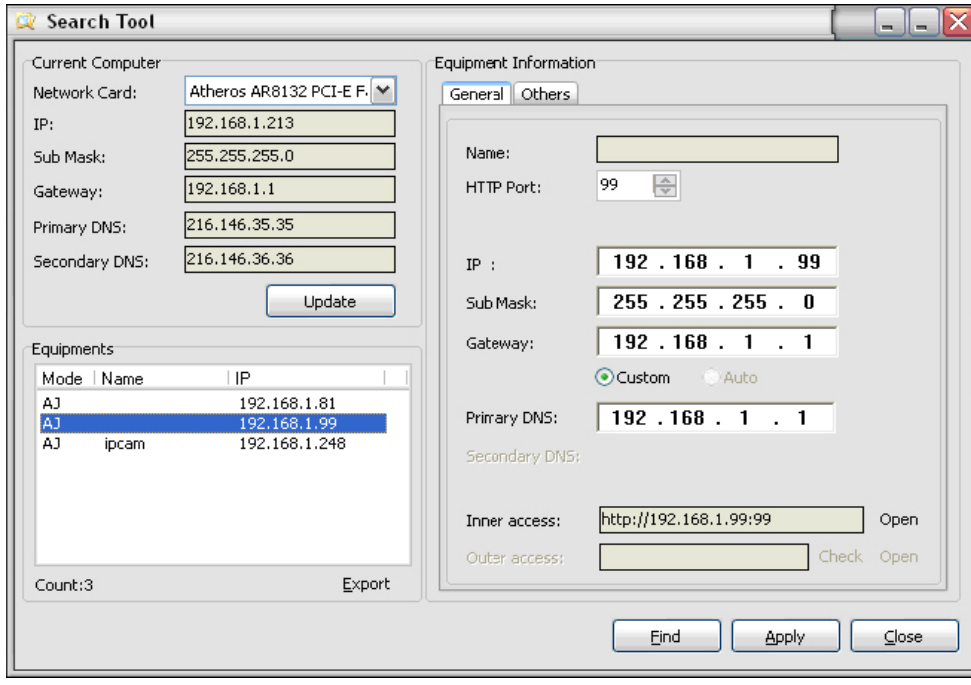
8. From the Command Prompt, type in “ipconfig” then press Enter.



9. Write down the number that represents the Default Gateway, then go back into the Search Tool.

3.2 Connecting Your Camera To Your Local Network-Continued

10. Running the Search Tool software, If network cable and power supply are correctly connected, device type, name and IP address will be shown in the Equipments list (Otherwise, please confirm whether power supply and network cable work normally).



In the picture above, the configuration information of the current computer is listed on

the left side; and the network configuration information of the selected device is listed on the right side. Default IP address of the IP camera is 192.168.1.99, and HTTP port is 99.

From the Search Tool, Select your IP camera. Here, you will need to re-address your camera's IP address based off of your Local Network Default Gateway. For example: If your Default Gateway is 192.168.1.1, you should change the last set of values of your address from 1to a larger value such as 99. Therefore, your new address will read "192.168.1.99" (The last set of values must be lower than 254).

11. Next, change the Gateway and DNS IP address in the network setting to exactly match your Default Gateway.

12. Now Change the Data Port to 80.

13. Last click "Apply" enter the Username and Password. The Username will be "admin" and the Password field will remain empty.

14. Last, click "OK" and your camera will automatically reboot as it saves all changes that you have just mode.

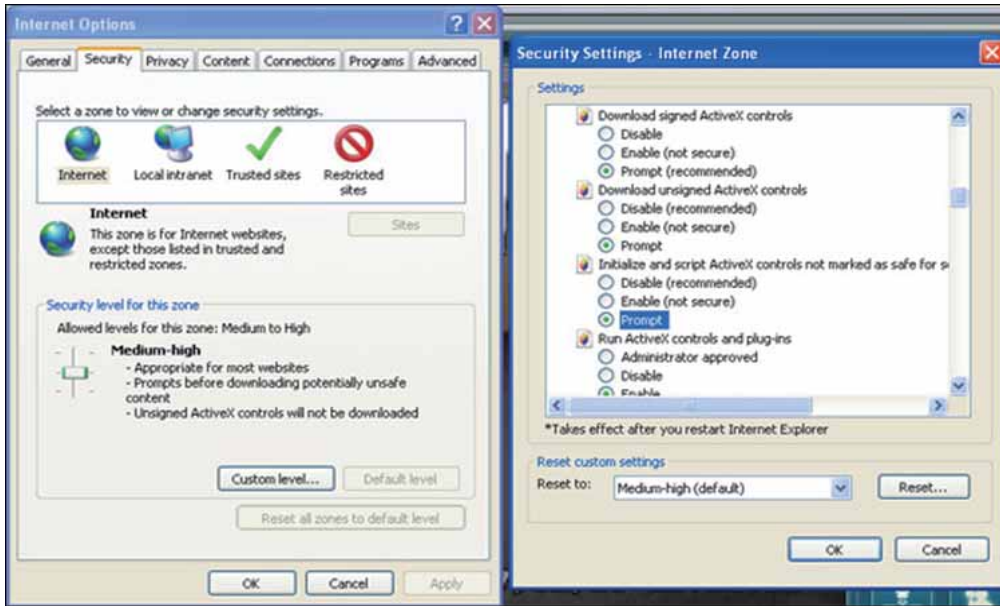
*** The first time that you connect to your camera either from your local network or from a remote network, you will need to connect using an internet Explorer browser, and you must prompt three necessary ActiveX controls. Please refer to Section 4 for ActiveX configuration.

4. Prompting the necessary ActiveX controls

The first time you access your camera online from a new computer(including the LiveDemo), you will need to prompt three necessary ActiveX controls.

1. From Internet Explorer click on "Tolls" then select " Internet Options." Select the "Security" tab, and then click the "Custom Level" button.
    - If you are using either Windows Vista or Windows 7, please run Internet Explorer as Administrator.

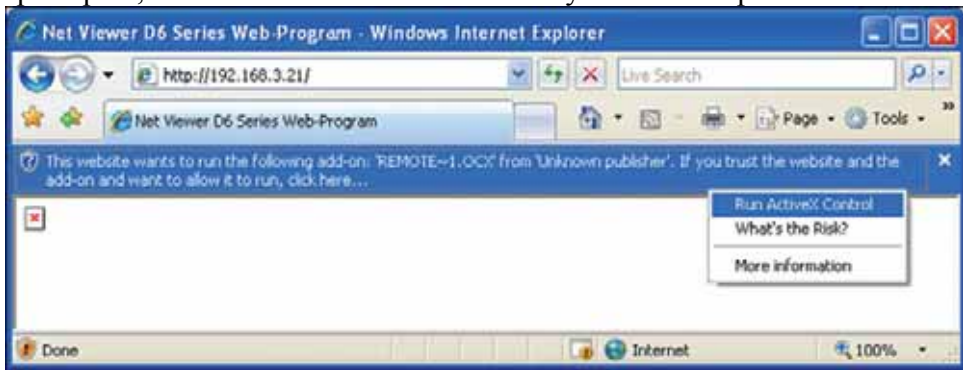
    Now, change the tree following options to "Prompt":
    ---Download Signed ActiveX controls
    ---Download Unsigned ActiveX controls
    ---Initialize and script ActiveX controls not marked as safe for scripting.



2. After all three ActiveX controls are prompted; please login to you camera's IP address. If this is your first time logging into your camera, you will type into an internet Explorer browser http:// followed by the IP address that you've entered into the IP address field of the network setting section. For example, the address will look like this: Http://192.168.1.99

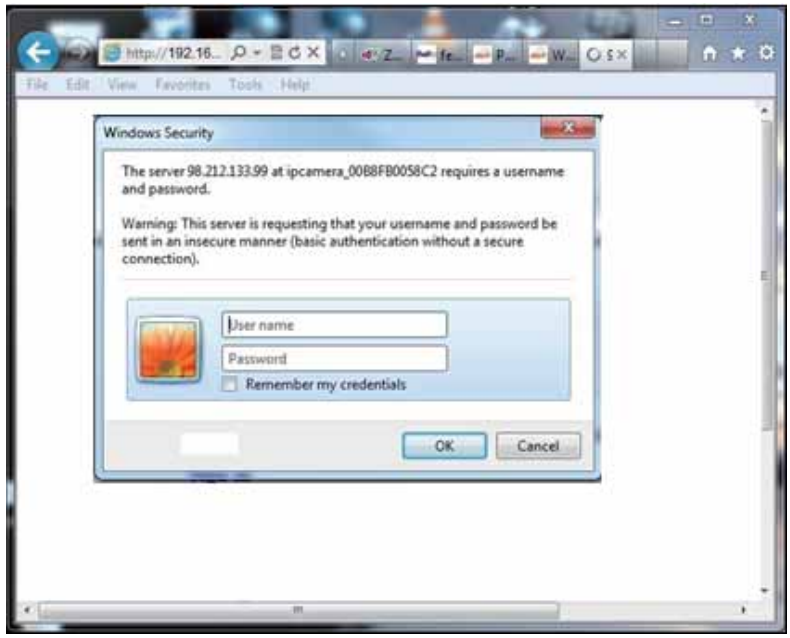
4.1 Prompting the necessary ActiveX controls-continued

3. This will usually prompt you or a bar may appear on the top of the page. If prompted, select run or install. Click on the yellow bar to proceed.


Net Viewer D6 Series Web-Program - Windows Internet Explorer
http://192.168.3.21/
Live Search
Net Viewer D6 Series Web-Program
Page
Tools
This website wants to run the following add-on: 'REMOTE~1.OCX' from 'Unknown publisher'. If you trust the website and the add-on and want to allow it to run, click here...
Run ActiveX Control
What's the Risk?
More information
Done
Internet
100%

*If you are using Internet Explorer version 9.0 , this prompt bar will appear on the bottom of your browser instead of at the top of your browser.

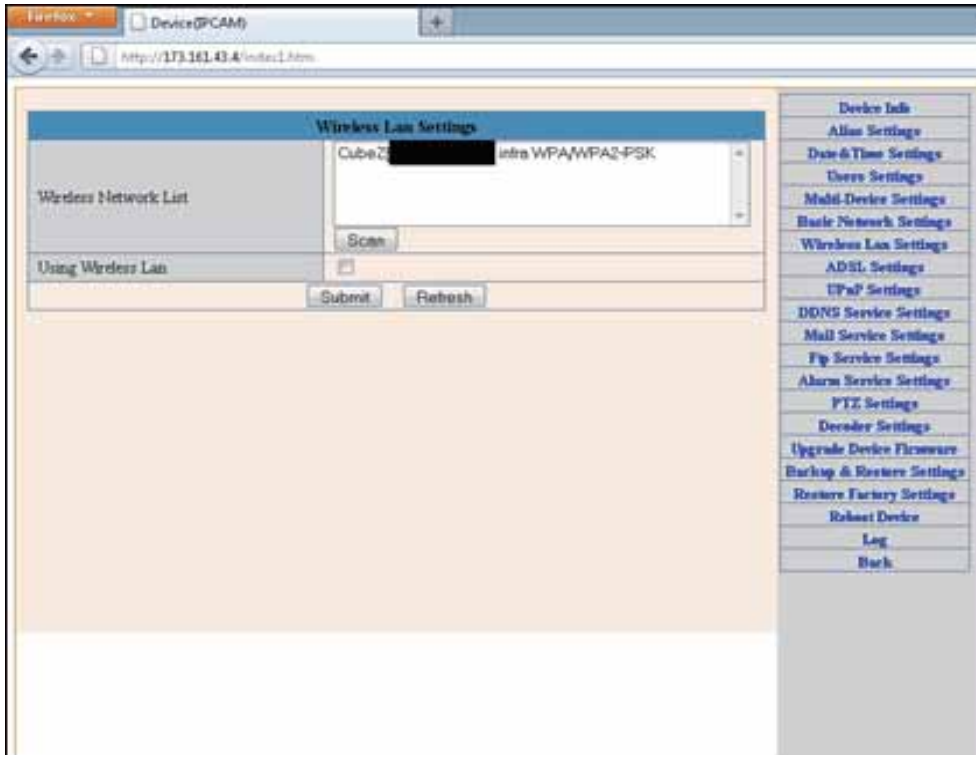
5. Logging into your camera from a local internet location


Windows Security
The server 98.212.133.99 at ipcamera_00B8FB0058C2 requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name
Password
Remember my credentials
OK
Cancel

1. To access your camera from your local connection, you will need to open an Internet Explorer browser. In the browser, type Http:// followed by the IP address that you've entered into the IP address field of the network setting section. For Example, The address will look something like this : Http://192.168.1.99
2. A Windows Security pop-up will appear. In this window, Type "admin" as the Username, and Leave the Password field empty.
3. Once the Username and Password are accepted, choose the option to sign in using ActiveX Mode (For IE Browser).

6. Enabling wireless connection using a wireless router

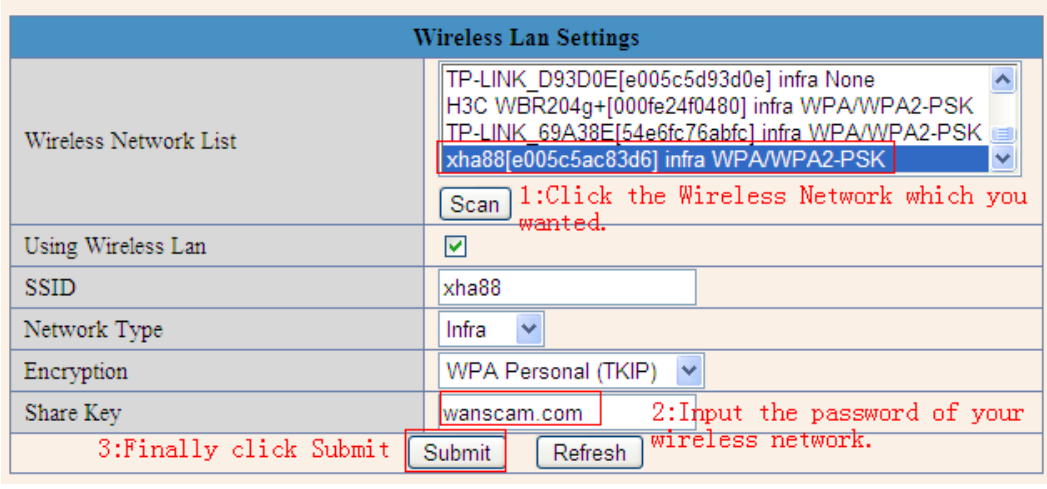
1. While your camera is still connected directly to your router with an Ethernet cable, go to the Wireless Lan Settings section on your camera's menu.
2. Next, click 'Scan' to search for available wireless networks.



3. Once you have selected your wireless network, enter your wireless network's password into the "Shared Key" field.

4. After you click submit your camera should automatically reboot to save these settings. Please wait 30 seconds after your camera has rebooted, then you may disconnect the Ethernet cable that is connecting your camera to your router.

5. Your camera should now be successfully communicating wirelessly with your wireless router.

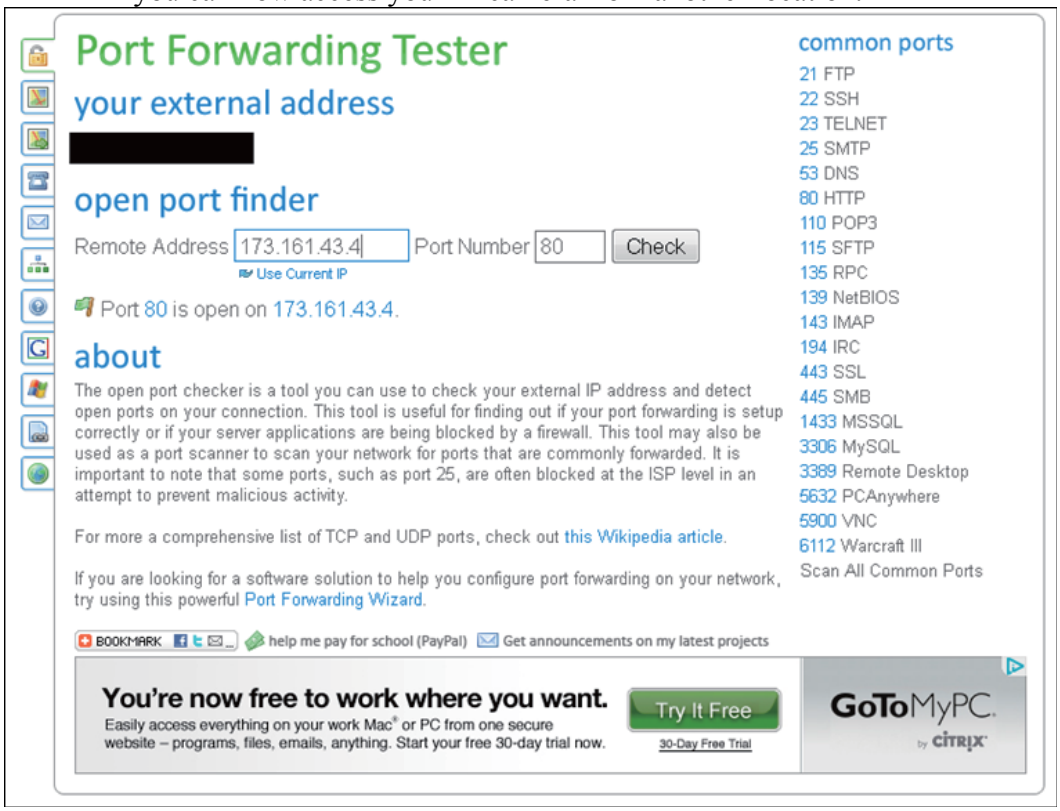


7. Configuring the remote access

1). Each manufacturer of routers handles Port Forwarding in a different way. For

detailed, router specific instructions, please visit www.portforward.com and find the model of your router. Then select 'Default Guide' for detailed screenshots and use them to help you through the rest of these instructions.

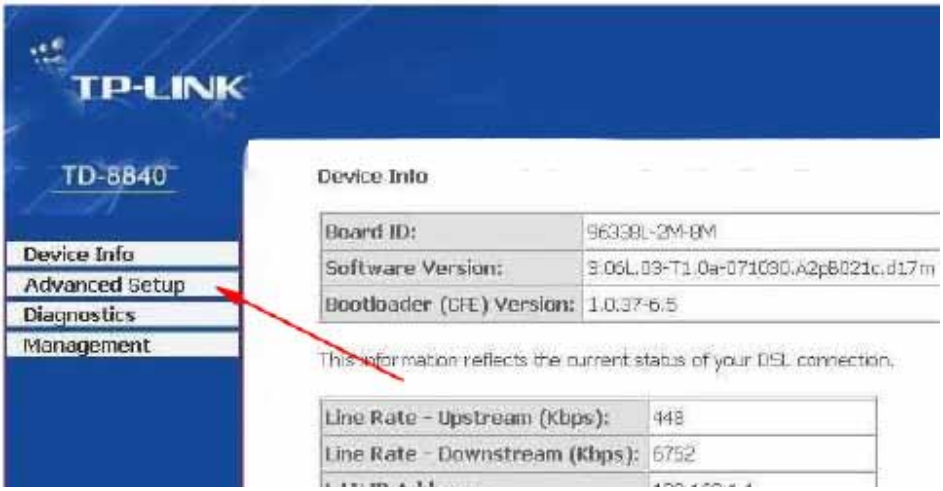
1. Open Internet Explorer and type in the IP address of your Default Gateway. This opens the configuration page of your router.
2. Next, create a Port Forwarding rule for the IP camera.
   A. The port number to forward will be 80 if you have followed the manual thus far.
   B. Your Router will ask for an IP address as well. Input the IP address of your IP camera.
3. After creating the Port Forwarding rule, visit Http:// www.yougetsignal.com/tools/open-ports/
   A. Write down your external address, it will be used later.
   B. In the box that says 'Port Number', Type in the port number that you have created a port Forwarding rule for, and click "Check"
   C. If it says 'Port is open' then you have set up Port Forwarding properly and you can now access your IP camera from another location.


Port Forwarding Tester
your external address
[redacted]
open port finder
Remote Address 173.161.43.4 Port Number 80 Check
Use Current IP
Port 80 is open on 173.161.43.4.
about
The open port checker is a tool you can use to check your external IP address and detect open ports on your connection. This tool is useful for finding out if your port forwarding is setup correctly or if your server applications are being blocked by a firewall. This tool may also be used as a port scanner to scan your network for ports that are commonly forwarded. It is important to note that some ports, such as port 25, are often blocked at the ISP level in an attempt to prevent malicious activity.
For more a comprehensive list of TCP and UDP ports, check out this Wikipedia article.
If you are looking for a software solution to help you configure port forwarding on your network, try using this powerful Port Forwarding Wizard.
common ports
21 FTP
22 SSH
23 TELNET
25 SMTP
53 DNS
80 HTTP
110 POP3
115 SFTP
135 RPC
139 NetBIOS
143 IMAP
194 IRC
443 SSL
445 SMB
1433 MSSQL
3306 MySQL
3389 Remote Desktop
5632 PCAnywhere
5900 VNC
6112 Warcraft III
Scan All Common Ports
BOOKMARK
help me pay for school (PayPal)
Get announcements on my latest projects
You're now free to work where you want.
Easily access everything on your work Mac® or PC from one secure website – programs, files, emails, anything. Start your free 30-day trial now.
Try It Free
30-Day Free Trial
GoToMyPC
by citrix

2). Port Forwarding For TP-LINK TD-8840 WIFI Router

Take the TP-LINK TD-8840 router port mapping setting as example. To set up IP

Camera as an example: router inner web IP is 192.168.1.1, IP camera inner web address is 192.168.1.50, and port is 80.
1. First log in router web administration interface.
2. Click in front of left side “Advanced Setup



3. Click “virtual server” in the unfolded menu.

4. fill “80” under the right **port start** or **port end**, **Server IP address** fill "192.168.1.50", protocol select "TCP/UDP"OR”“TCP”, finally don’t forget click under “"save/apply”
1. DLINK ex-factory definition router address is 192.168.0.1
2. Linksys ex-factory definition router address is 192.168.1.1
3. 3com ex-factory definition router address is 192.168.2.1
4. Microsoft ex-factory definition router address is 192.168.2.1
5. Net gear ex-factory definition router address is 192.168.1.1
6. Asus ex-factory definition router address is 192.168.1.1

8. Main menu interface operation

Notice: Please use IE browser to monitor this IP camera.

The Pan/Tilt Feature only work when the cameras have this Pan/Tilt function.

This option enables log detection. After the online user clicks this button, a log is entered into the camera's Log Data documenting the IP address of users who have accessed the IP camera. This Option enables alarm detections too.

This button make the camera Vertical cruise (for the Pan/Tilt Cams).

This button make the camera Level cruise (for the Pan/Tilt Cams).

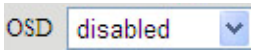
This button flips the image vertically.

This button flips the image horizontally.

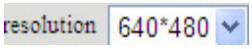
This button for turn on and turn off the IR LED Light.

Control the speed of the Pan/tilt. Only work for the Pan/tilt Cams.

This button for setting the Preset of the camera. Only work for Pan/tilt Cams



This setting changes the color of the OSD lettering.



This setting changes the image resolution.

This setting changes the image frequency.

This setting changes the image brightness.

This setting changes the image contrast.

This option resets all main menu options to factory default.

This option opens the camera's recording functionality menu.

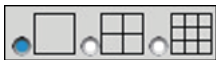
This option takes a snapshot of the current screen and saves the snapshot to the PC's Hard Drive.

This option enables User-to Camera audio. If the online user

This option enables Camera-to-User audio. If the online user has speakers connected and configured to their PC, clicking this option will allow them to hear audio from the location of the camera.

This option enables the camera's Network Indicator LED light turn on or turn off.

This button opens the IP camera's Backend Menu


These options enable single view, quad screen view, or 9 screen view: This function serves no purpose unless you have more than one camera connected and configured to your interface.

* Please refer to section 8.1.1 Multi-Device Settings*****

This feature is only supported by the PTZ IP Camera. Enable the Zoom Function.

8.1. Manager Operation

When you logged on as Administrator, click on "Administrator action" to enter setting interface. Device Information: You can see the device serial number, equipment systems and device firmware version of the application firmware version of the.

Alias setting : You can set your favorite device aliases.
Date&Time set : seting the date and time.
Uer settings : Can be set up to 8 users. On this page you can set up accounts of the user name, password, as well as in their packet (administrator, operator, visitor).

- **Visitor :** In this mode, you can only visit.
- **Operator :**You can set the direction of the lens device, set the video screen's brightness, contrast and other parameter.
- **Administrator :** You can set the device advanced configuration.

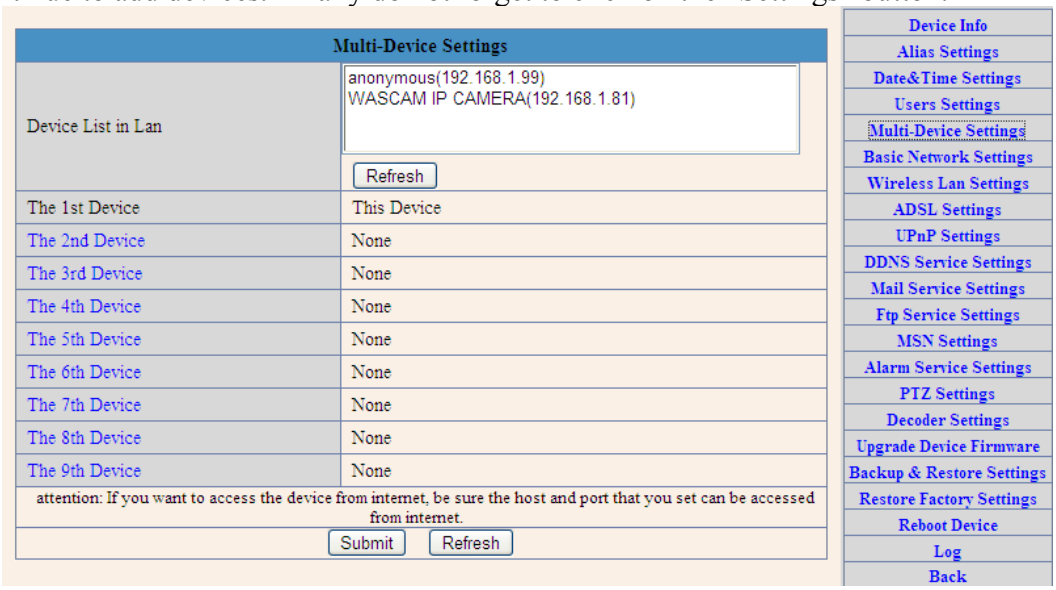
UPnP set : If you want internet access IPCAM, to ensure that the state is successful UPnP.
Device Firmware Upgrade: The system firmware update the device firmware and application of

Restore factory settings : When there is not a response when the error occurred, you can restore the factory settings to resolve the device.
I rebooted the device :I rebooted the device.
Back: Return to monitor mode

8.1.1 Multi-Device Settings

- Add a local area network equipment

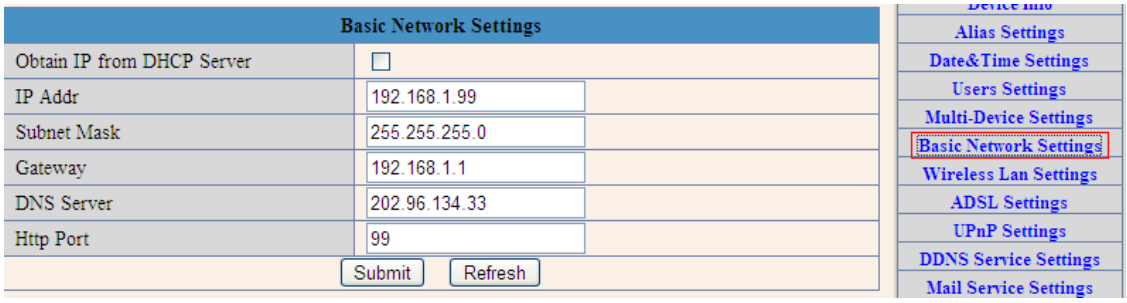
In the multi-device configuration page, you can see all the equipment inside the LAN. The first device is the default device. You can add more devices listed in the list of equipment. Embedded applications, up to 4 devices at the same time-line. Click the "second road equipment" and double-click "Current list of devices in the LAN" in the device entry name, host address, Http port will automatically be filled, require the user to fill in the correct account name and password, click "Add." Repeat this process you can continue to add devices. Finally do not forget to click on the "Settings" button.



- **Add a device on the internet**

First, make sure you want to add devices to access via IP address or domain name. For example:http://202.96.133.134: 9008 or http://IPcam.dyndns.org:9008. And then fill in host address: 202.96.133.134 **HttpPort**: 9008 or host address: IPcam.dyndns.org **Http port**: 9008. and fill in the correct account name and password to the last click on "Add." Repeat the above steps can add other devices

8.1.2 Basic Network Settings



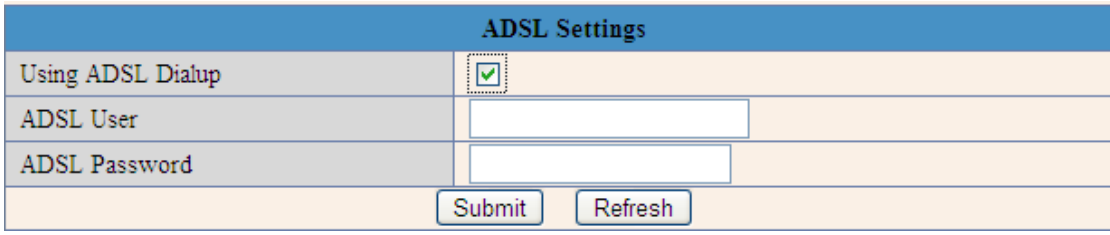
This sector is for DHCP and IP configuration，port forwarding is needed, If you choose to set IP address，please fill in the relative IP address、subnet mask, gateway, DNS server, Http port;

8.1.3 Wireless Setting

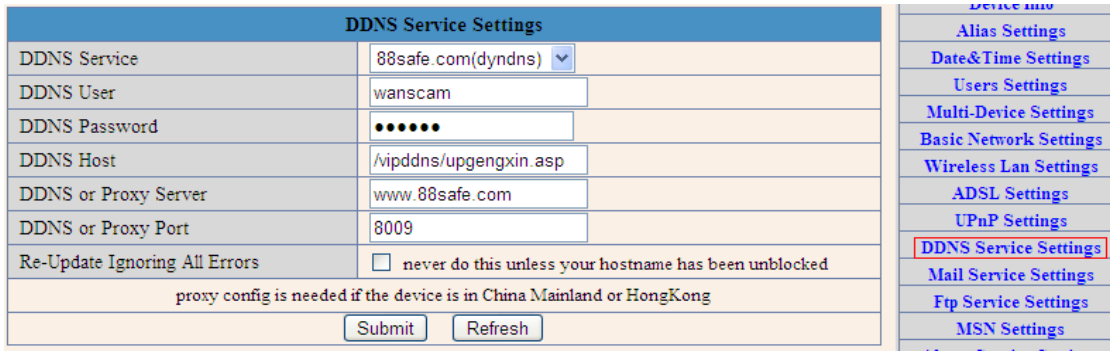
For the details please view **“6. Enabling wireless connection using a wireless router”. Page 14th.**

8.1.4 ADSL Setting

When your device directly connected to the Internet via ADSL, when you need to enter fill in your ISP service providers obtain from the account name and password. Duly completed and click “Settings” button. Your device can connect to the internet has.



8.1.5 Dynamic DNS Setting (DDNS)

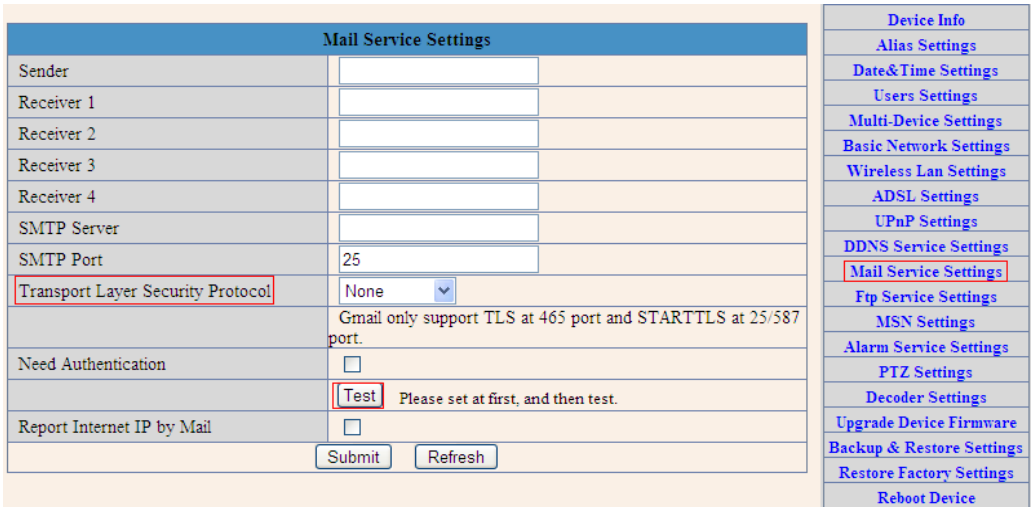


All the above information is set up when the device is ready to deliver; users generally do not need to change. In case of any accidental loss, user needs to re-obtain the domain name, and fill it by himself, juts do as the above, the user’s name is just the first four characters, and this is for remote access. For example, http://abcd.88safe.com the user’s name is abcd. The password of this domain name you can find from the a Mark which under the device body.

When connected the camera in a working network, It displays " 88safe is OK" on Device Info Part; it means that it was successfully set. If you need to use your Dynamic DNS, please select the appropriate service providers (on DDNS service) then enter the following information, then save it;.

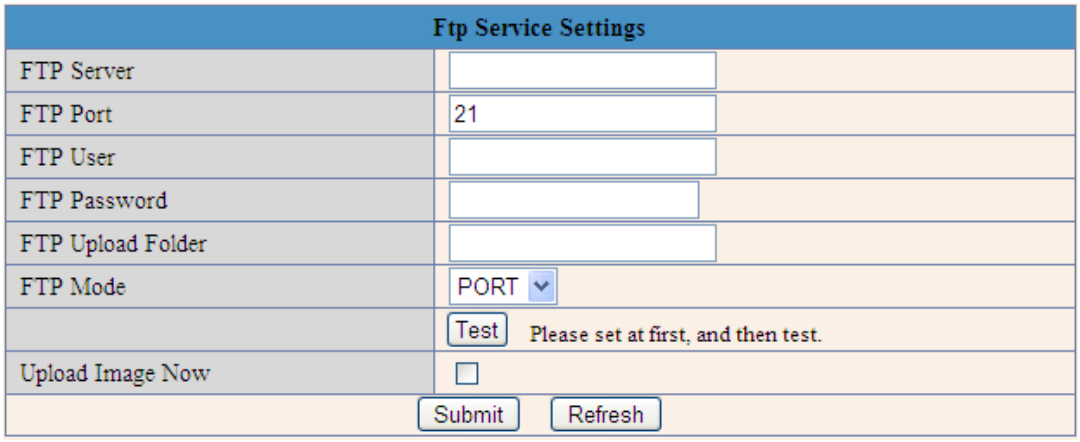
;.

8.1.6 E-mail and FTP service Settings



The above setting is a preparation for the alarm function, the sender should be entered the sender's email address，recipient 1、2、3、4 is filled with recipient E-mail address；SMTP server should be filled with the sender email SMTP server，e.g. the sender email address is abc@163.com，and enter mail.163.com. Generally SMTP port is 25，do no need to change；when needs to check, just tick it, and enter SMTP user and SMTP password，both of them are provided by Email provider，and test according to reference；when needs to send, please tick Email notification Internet IP address；The e-mail server and other information can be obtained from the mail service provider the email notification is image captured when alarming if no email notification is needed when alarming, and then no need to enter.

Set up FTP service, you can fill in parameters like following:



The above setting is equally similar to Mail Server Settings，when alarming is triggered it also sends image，please enter FTP server、FTP port、FTP user、FTP password, FTP upload directory、FTP mode，FTP mode has two options: PORT and POSV. If needs a quick upload image, then select it, edit upload image interval （second）

8.1.7 Alarm Service Settings

As shown below, there are two modes of alarm trigger, first one is motion detection, please refer to below interface，the sensitivity of motion detection can be adjusted according to the users′ requirement, the higher the number is, the lower sensitivity is; Another mode is input alarm, when connected, it triggers alarm through alarm input signal which connects to linkage alarm GPIO;

When triggered, there are 3 alarm modes：one is IO alarm linkage, camera connects with linkage alarm box through GPIO, sound the siren ；the second is email notification, send email with images captured；the last is upload pictures alarm，as the way mentioned before FTP upload pictures alarm, Upload pictures interval （second） keeps consiste nt with the mentioned upload pictures interval of Ftp service settings. The schedule refers to arming time，as the selected time interval： 0：00 minute per week to 0：45 minutes and Monday 1：00 hour and 2：00 hour

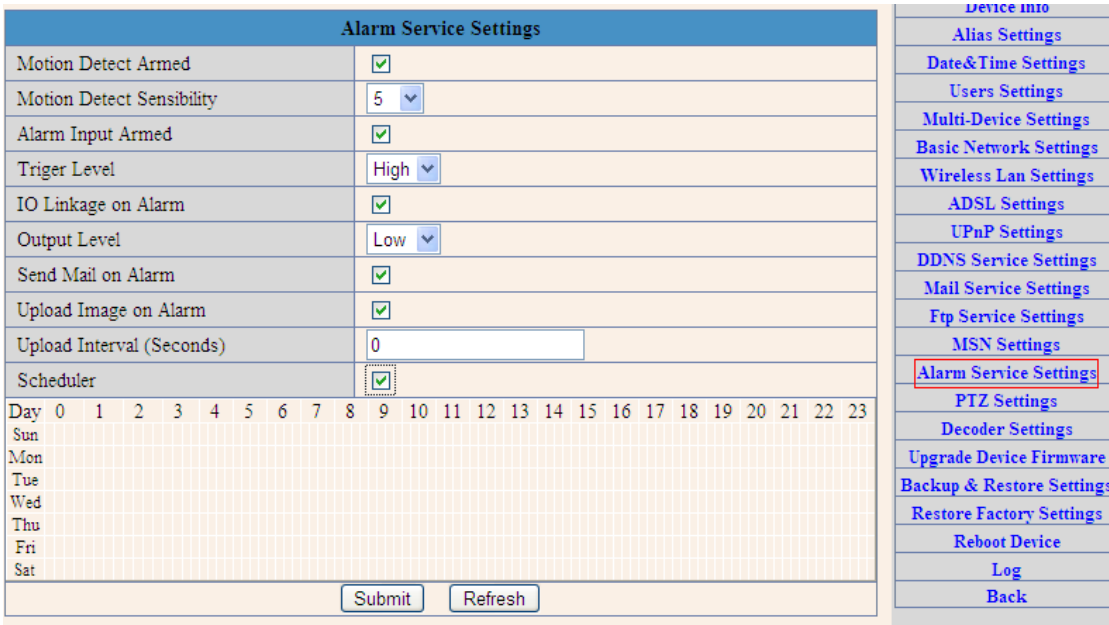
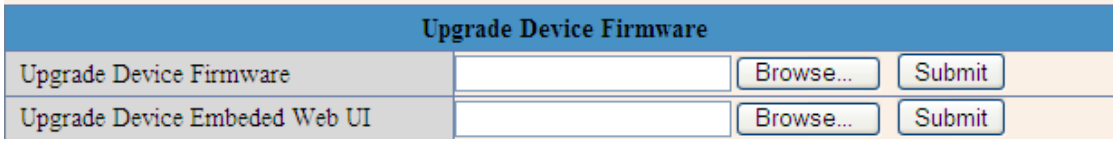


Figure3.15

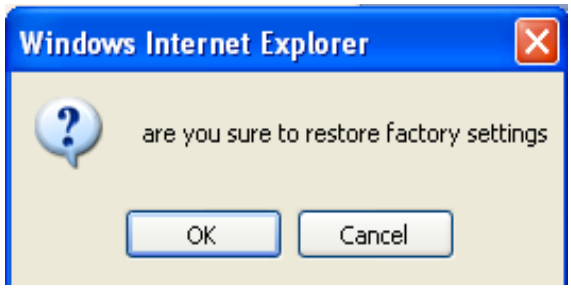
8.1.8 Reset/Firm Ware Upgrade

This sector is for camera firmware upgrade, it includes device system firmware Upgrade Device Firmware and device application firmware Upgrade Device Embeded Web UI. Be cautious to apply for it!



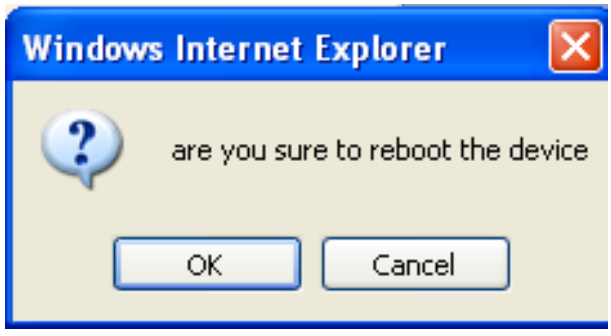
8.1.9 Restore Factory Settings

When users forget password, we can restore ex-factory settings, when click, a picture will pop up, Click ok, and wait for 1 minute and you can use it normally. User setting feature restores



8.1.10 Reboot Equipment

Click restart, it appears the above picture, click ok, wait for 1 minute and you can use it normally



9. Warranty

Under normal use condition, products resulting from its own failures in the warranty period will be free maintenance. Warranty Terms as following:

a) Charge-free maintenance of the product is one year. We can repair it for free during the guarantee period (Damages not caused by misuse or vandalism).
Repair over guarantee period, we will charge maintenance fee.

b) During guarantee period, breakdown caused by misuse or other reasons out of range of warranty. You could ask repair depend on the card. We only charge for changed components, the maintenance charge is free.

c) When the products need maintenance, hand up the card with products to the manufacture or local distributor.

d) Take apart item crust, tear up the sealing label privately, this is out of warranty range.

e) We do not accept the damaged item due to modification or add other functions.

The Following Circumstances will not be free warranty

a) Period check, maintenance or change components due to normal attrition.

b) The damages due to crash, extrusion, artificial flooding, moisture or other personal reasons.

c) The damages due to floods, fire, lightning strike and other natural calamities or force majeure incidents factors

d) Repaired item by non-authorized repair centers.

All above terms, if changed, regarded to relevant regulations.

THAT'S ALL, THANK YOU!